

Advanced Projects, Environmental and 2
Regulatory Affairs (APERA) - Comments on the 3
Preliminary Fugitive Dust Emissions Study 4
for the Intermountain Power Project (IPP) 5

This memorandum is in response to the April 14, 1982 8
request by Document Control Form for comments on the "Fugitive 9
Dust Emissions" study-preliminary report prepared by Black &
Veatch (B&V). The report was reviewed for possible errors in 10
analysis and/or the omission of important issues. APERA 11
provides the following comments.

Insert A → *2.2* The Fugitive Dust Emissions study did not account 13
for particulate matter (PM) emissions from the 14
chimneys. Both PM chimney and fugitive emissions
must be included in the IPP air quality impact
analysis. (14)

2.3 The combined effect (chimney and fugitive emission 16
impacts) could be a 121% consumption of the 24-hr 17
Prevention of Significant Deterioration (PSD)
increment for PM. The H. E. Cramer Company 18
estimated in their June 1981 report, "Calculated
Air Quality Impact of Emissions From the IPP Power 19
Plant for the Revised Stack Configuration", that
the PM emissions from the chimneys will consume
21.6% of the 24-hr PSD increment for PM. The B&V 21
study estimated that PM fugitive emissions will
consume 99% of the 24-hr PSD increment in the same
general locality (North-Northeast (NNE) corner of 22
plant boundary) of the chimneys emission impact.

2.4 PM emissions from haul roads were not considered 24
in the Fugitive Dust Emissions study. APERA 25
feels it is probable that IPP will not have to
consider these emissions in any further study. A 26
source is not required to include temporary PM
emissions from haul roads in a PSD impact
analysis. A source is only required to consider 27
non-temporary PM emissions from haul roads under
current Federal regulations. Non-temporary PM 28
emissions from haul roads were not included in the
air quality modeling study performed by Utah and
subsequently revised by the Environmental 29
Protection Agency (EPA) on May 30, 1980, prior to
issuance of the IPP permit.

may
4.5 B&V have used PM emission factors (EF) that are 31
not as beneficial to IPP as other available EF
recommended by EPA. A quick check by Tim L. 33
Conkin shows that there may be a substantial
decrease in the EF for the reserve coal storage
pile (contributes approximately 78% of PM fugitive 34
emissions impact) by using the EF equation given
in the September 23, 1982 study conducted by 35

Environmental Research and Technology, Inc. (ERT). ERT states this EF equation has numerous shortcomings but was recommended by EPA in 1981.	36
5.6 B&V used the Industrial Source Complex (ISC) model to estimate PM fugitive emission impacts for IPP. The ISD model is probably the correct model to use for IPP impact analysis. The ISC model was not the model used by Utah and EPA for the IPP impact analysis but it is an EPA-recommended model for estimating short-term and annual concentrations during a one-year period for complex industrial sources.	38 39 40 41 C
6.7 Not all of the PM 24-hr average fugitive emission impact concentrations were given in this study. The 24-hr average fugitive emission impacts for PM by modeling modified coal and a reserve coal storage pile at 2,153,000 tons is not given. A 2,153,000 ton pile is the size the pile is presently designed for. APERA feels the Department should be informed of all PM impact concentrations.	43 44 46 47
7.8 APERA feels further consideration should be given to using worst case coal characteristics not as restrictive as the worst case coal (modified coal) characteristics used in the B&V study. It was pointed out by the Mechanical Engineering Section (MES) that an average of 50% coal B and 50% coal F will give worst case coal characteristics not as restrictive as the modified coal and EPA may feel this average is a reasonable assumption.	49 50 51 52 53
8.9 APERA feels consideration should be given to extending the NNE plant boundary to include the most severe PM impacts. The most restrictive 24- hr average PM impacts occur approximately at the NNE plant boundary (impacts inside the plant boundary are not considered by EPA in the impact analysis). The impacts diminish with distance away from the boundary.	55 57 58 59
9.10 On page A-4 (Appendix), Part A, Reserve Coal Storage, B&V makes a mathematical error. The last math operation in Part A should equal 0.00000g/sec/m2 and not 0.0001g/sec/m2.	61 62 O
On April 6, 1982, Mr. Tim L. Conkin, APERA, and Ms. Charlotte Welty, MES, talked by telephone with Mr. Dan Nelson, B&V, concerning the Fugitive Dust Emissions study. Mr. Nelson stated that he was compiling a list of B&V and Department suggested changes to the study. Mr. Nelson will include these suggestions in a letter he will send to the Department and will not proceed with further studies until the Department has	64 65 66 67 68

reviewed any changes to be made to the study. The air quality issues discussed and conclusions made are listed below. 69

Insert B → *1.2* Mr. Nelson stated that the B&V study did not include PM CHIMNEY EMISSION impacts. Mr. Nelson feels that the H. E. Cramer study impacts and the B&V study impacts will probably be additive to show 121% consumption of the 24-hr PSD increment. B&V will include PM chimney emissions in any further study. 71
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2.3 It was suggested that non-temporary emissions from haul roads should be considered in any further study even though they were not considered in the Utah modeling (revised by EPA). It was felt that non-temporary haul road emissions will not contribute much to the PM impacts because the roads will probably be paved. Inclusion of these emissions or a statement that they do not significantly contribute to PSD increment consumption will make the impact report more complete. Mr. Nelson will investigate the contribution non-temporary emissions from haul roads make on the increment consumption. 76
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2.4 Mr. Nelson stated that the EF used in the Fugitive Dust Emissions study had been previously accepted by EPA Region VIII. It was pointed out that different EF are suggested for use by ERT in the "Workbook on Estimation of Emissions and Dispersion Modeling for Fugitive Particulate Sources". Mr. Nelson stated he has been trying to obtain this document and would be very interested in receiving it. APERA will send a copy to Mr. Nelson and Mr. Nelson will include his comments on this ERT document in his letter to the Department. 84
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2.5 Mr. Nelson felt the EPA recommended ISC computer model (used in the B&V study) was the correct model to use in this study and that the previously used Utah Valley model (used by Utah in the IPP PM impact study prior to issuance of the permit) is of another era. Also, Mr. Nelson did not understand how the Utah Valley model could be applied to fugitive emissions. It was pointed out by Mr. Nelson that Utah and EPA previously only considered PM annual average impacts and not 24-hr average impacts. Neither Mr. Nelson nor APERA understand why the 24-hour average PM impact was not addressed by Utah and EPA. Mr. Nelson further pointed out that the annual average impacts predicted by the Utah Valley model are greater than that predicted by B&V's ISC model. Therefore, it is felt that the Utah Valley model will predict greater 24-hour average impacts than the ISC model. 91
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5 .6.	Mr. Nelson agreed to inform the Department of the modeled PM impacts when modified coal characteristics and a reserve coal pile of 2,153,000 tons is considered (impacts not given in the preliminary report).	102 103
6 .7.	Mr. Nelson will give further consideration to the modeling of IPP worst case coal characteristics not as restrictive as the worst case modified coal characteristics which were modeled in the preliminary PM fugitive emissions impact analysis.	105 106 107
7 .8.	Mr. Nelson will analyse the amount of additonal NNE acreage required to move the NNE IPP boundary to a point where PM impacts outside of the boundary will not violate any PSD increments.	109 110
8 . 9.	Mr. Nelson stated that the ash silo vents are now to be included in the IPP design. The EPA was previously informed that there would be no ash silo vents and EPA, therefore, did not consider ash silo mission impacts prior to issuance of the permit. Ash silo vent PM emission impacts were also not modeled in the preliminary Fugitive Dust Emissions study, but will be modeled in any further studies. This will result in an increase in increment consumption.	112 113 114 115 116 117
	If you have any questions or comments, please contact Tim L. Conkin at extension 5794.	119
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cc:	J. H. Anthony	124
	J. M. Hayashi	125
	R. L. Nelson	126
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	C. Welty	131
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	S. A. Clark	134
	T. L. Conkin	135

MEMORANDUM

MEMO BY _____

TO _____

DATE _____

FILE TITLE _____

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insert A → 1. The Fugitive Dust Emissions study compared the PM emission impacts to the PSD increment standards but not to the National Ambient Air Quality Standards (NAAQS). The PSD increment standards are the controlling standards for IPP, but an explanation that IPP will also comply with the NAAQS will make the B+V PM emissions study more complete.

Insert on Page 3

Insert B → 1. Mr. Nelson agreed that compliance with the NAAQS should be addressed in any future B+V PM emissions ^{impact} study to make the study more complete. It was pointed out that the secondary NAAQS (protects against adverse welfare effects) for PM is presently in violation due to background concentrations attributed to wind-blown soil that is uncontaminated by pollutants resulting from industrial activity. The June 1981 H.E. Cramer IPP air quality impact report discusses that uncontaminated wind-blown soil background concentrations need not be considered in assessing compliance with the NAAQS. The B+V PM emissions impact study should also discuss this point.

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